

**REMARKS**

Claims 1-4 and 6-13 are pending in the application. By this amendment the applicant adds new claim 14.

In the Office Action dated May 21, 2003, claims 11-13 were rejected under 35 U.S.C. §112, first paragraph. Claims 1-4 and 6-13 were rejected under 35 U.S.C. §102(a or e) or in the alternative under §103(a).

**§112 rejection**

On page 2, paragraph 3 claims 11-13 were rejected under 35 U.S.C. §112, first paragraph, as containing subject matter which was not described in the specification in such a way as to convey to one skilled in the relevant art that the inventor, at the time of the application was filed, had possession of the claimed invention. The Office Action states that with respect to claim 11, "the description of the glass composition including "essentially free from boron" in combination with a glass including  $\text{TiO}_2$  is considered new matter." The applicant respectfully traverses this rejection. Applicant directs the attention of the Examiner to claim 1 as filed, and claim 4 dependent thereon. Claim 1 clearly contemplates, and therefore discloses, a glass composition including  $\text{TiO}_2$  that is essentially free from boron. This is supported by claim 4, dependent on claim 3 and claim 1 and narrower than claim 1, wherein the claim recites the glass composition is substantially free from boron. The inclusion of the limitation in dependent claim 4 requires the contemplation of the limitation in the independent claim from which the claim

depends. Since original claims are part of the original specification as filed, the limitation “essentially free from boron” in connection with glass containing  $\text{TiO}_2$  was fully disclosed in the specification as filed and cannot comprise new matter. The applicant requests that this rejection be withdrawn.

### **Prior art rejections**

In the Office Action claims 1-4 and 6-13 were rejected under 35 U.S.C. §102(a or e) as anticipated by or, in the alternative, under §103(a) as obvious over Sugimoto et al. 6,108,192 [“the ‘192 patent”]. Claims 1-4 and 6-13 were rejected under 35 U.S.C. §102(a or e) as anticipated by or, in the alternative, under §103(a) as obvious over Sugimoto et al. (US 6,458,734 [“the ‘734 patent”]

The applicant traverses the rejections as to each of the references cited.

As noted in the Office Action the glass composition of the ‘192 patent requires boron in amounts between 3-30% by weight. (col. 4, lines 1-6). Anticipation requires that each and every element of the claimed invention be met in a single reference. Each and every independent claims of the subject application as amended explicitly excludes boron from the glass composition.

The comments in the Office Action to the effect that because the ‘192 patent discusses the need for boron in the ‘192 patent (“excluding boron would merely raise the sintering temperatures”, page 3 paragraph 5 of Office Action) are irrelevant. The statements in the ‘192 patent relate only to the need for boron in the compositions of the

'192 patent, which are different than the claimed invention of the present application. The Office Action provides no basis for the suggestion removal of boron from the present invention would raise the sintering temperature in the present invention. Even if such were the case, a rise in sintering temperature would not preclude patentability of the present invention. Therefore the applicant requests the rejection on the basis of the '192 patent be withdrawn.

The Office Action notes in paragraph 5 that, with respect to claim 11, "essentially free from boron" does not set forth a quantitative amount and therefore does not exclude amounts of boron set forth in the '192 patent. The applicant submits that the meaning of "substantially free from boron" as used in the claims as amended refers to no boron or amounts of boron so small as to have no effect on the characteristics of the composition, but in any event less than 3%. Accordingly the limitation excludes amount set forth in the '192 patent.

Similarly, the glass composition of the '734 patent requires boron in amounts between 10-40% by weight (col. 3, lines 54-60). Anticipation requires that each and every element of the claimed invention be met in a single reference. Each and every independent claims of the subject application as amended explicitly excludes boron from the glass composition. Therefore the applicant requests the rejection on the basis of the '734 patent be withdrawn.

Applicant likewise traverses the rejection under §103 over the cited references. It would not have been obvious to one having skill in the art to remove boron from the glass

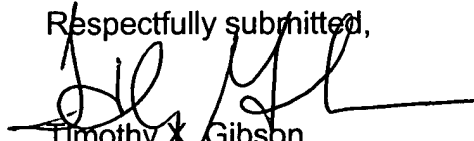
composition of the cited references to arrive at the invention of the present application. Each of the '192 and the '734 patents describe the advantages of the inclusion of boron, i.e., the lowering of glass viscosity and facilitation of sintering of the ceramic and glass compositions (see previously cited portions of the '192 and '743 patents). Neither of these references teaches or suggests the removal of boron from the glass composition of a dielectric composition would be advantageous. Indeed, the '192 and '734 patents teach away from the removal of boron. Accordingly the applicant requests withdrawal of the rejection of the claims under §103.

In view of the allowability of independent claims 1, 8, 9 and 11 the rejections of dependent claims 2-4, 6-7, 10 and 12-13 are overcome. In addition, based on the foregoing it is submitted that new dependent claim 14 is allowable.

For the foregoing reasons and in light of the amendments made herein the applicant earnestly solicits a Notice of Allowance for all claims pending in the application. The Examiner is encouraged to telephone the undersigned in order to expedite any detail of the prosecution.

A check in the amount of \$750.00 is included herewith. The Commissioner is authorized to charge any deficiency or credit any overpayment to Deposit Account No. 11-0223.

Respectfully submitted,



Timothy X. Gibson  
Reg. No. 40,618  
Attorney for Applicant

Kaplan & Gilman, LLP  
900 Route 9 North  
Woodbridge, NJ 07095  
732-634-7634

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on August 21, 2003.



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